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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,753	06/11/2002	Thierry Lucidarme	522-1781	8836
23644	7590	07/03/2006		
BARNES & THORNBURG, LLP P.O. BOX 2786 CHICAGO, IL 60690-2786			EXAMINER ABELSON, RONALD B	
			ART UNIT 2616	PAPER NUMBER

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,753

Applicant(s)

LUCIDARME ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2002 and 20 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34,35,37-39,43-51 and 54-59 is/are rejected.
- 7) ☒ Claim(s) 36, 40-42, and 52-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 20 March 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20 March 2002.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 34, 35, 38, 47, 48, 50, 58, and 59 rejected under 35 U.S.C. 103(a) as being unpatentable over Bud (US 5,598,407) in view of Seta (US 6,483,825).

Regarding claims 34, 47, 58 and 59, Bud teaches a first local mobile radio telecommunications network (fig. 1 see network connected to concentrator MC on left hand side, col. 2 lines 43-46, mobile radio transceiver, col. 2 lines 58-61, col. 3 lines 18-21) which is connectable to and compatible with a second mobile radio telecommunications network (fig. 1: see

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network connected to concentrator MC on right hand side, DECT standard, col. 2 lines 43-46).

Bud teaches the first local network comprises a first and a second radio head (fig. 1 boxes RB, vol. 4 lines 11-18) for radio communication with one or more user terminals (fig. 1 boxes T, col. 2 lines 43-46) compatible with the second mobile radio telecommunications network (fig. 1: see network connected to concentrator MC on right hand side, DECT standard, col. 2 lines 43-46, col. 3 lines 18-22).

Bud teaches a concentrator connected to the radio heads by a local shared resource network (fig. 1 box MC, col. 3 lines 11-18), the radio heads being shared resources of the concentrator wherein the first and second radio heads being controlled individually and remotely (MC responsible for controlling entire system, control of various resources, control various resources, col. 3 lines 55-62)

Bud is silent on a device for controlling the synchronization and frequency of a local timing signal of each of radio heads.

Seta teaches a device for controlling the synchronization and frequency of a local timing signal of each of radio heads / base stations (GPS receiver deployed at base station controller

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and base stations are kept in frequency and time synchronization, col. 2 lines 47-55).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Bud by inserting a GPS receiver at the concentrator. This modification can be performed according to the teachings of Bud. This modification would benefit the system by having a single device maintain the timing and frequency synchronization of the radio heads / base stations.

Regarding claims 35 and 48, the combination teaches the concentrator performs the remote control (see therefore clause for claim 34).

Regarding claims 38 and 50, as previously stated, the combination teaches the concentrator being a shared resource for the radio heads (Bud: MC responsible for controlling entire system, control of various resources, control various resources, col. 3 lines 55-62. Regarding the limitation, the concentrator performs modulation/demodulation (Bud, filtered Gaussian FSK, col. 4 lines 14-18).

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3. Claims 37 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bud and Seta as applied to claims 34 and 47 above, and further in view of Deo (US 6,975,632).

As previously stated, the combination teaches the concentrator being a shared resource for the radio heads (Bud: MC responsible for controlling entire system, control of various resources, control various resources, col. 3 lines 55-62. However, the combination is silent on the concentrator includes at least a digital signal processing unit.

Deo teaches the concentrator includes at least a digital signal processing unit (col. 1 lines 17-21).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Bud and Seta by using a concentrator that has digital signal processing units/boards. This modification can be performed in hardware. This modification would benefit the system since DSP boards can be developed to perform specific applications.

4. Claims 39 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bud and Seta as

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applied to claims 34 and 47 above, and further in view of Jackson (US 6,097,704).

The combination is silent on a scanning unit to scan transmissions from sources of radio energy, the scanning unit being a shared resource on the local shared resource network.

Jackson teaches a scanning unit to scan transmissions from sources of radio energy (col. 9 lines 65 - col. 10 line 5). Regarding the limitation the scanning unit being a shared resource on the local shared resource network, a single scanner is used for multiple portable telephones.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Bud and Seta by incorporating a scanning unit at each base station. This modification can be performed in hardware. This modification would benefit the system by allocating available slots to portable telephones requesting service.

5. Claims 43 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bud and Seta as applied to claims 34 and 47 above, and further in view of Veloso (US 6,122,508).

In addition to the limitations previously addressed, wherein two or more radio heads are adapted to receive signals transmitted from a user terminal and to transmit these to the concentrator via the local shared resource network (fig. 1: note mobile radio module 'MRM' in the middle of the diagram transmits to more than two radio bases 'RB').

The combination is silent on the concentrator is adapted to combine the signals from the two or more the radio heads.

Veloso teaches a concentrator is adapted to combine the signals from the two or more the devices (fig. 1 box FSU, col. 4 lines 7-8).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Bud and Seta by incorporating the algorithm of Veloso within the concentrator (Bud: fig. 1 box MC). This modification can be performed in software. (Suggestion) The suggestion for the modification is the concentrator is enabled to function as a multiplexer (Veloso: col. 4 lines 8-10).

6. Claims 44, 45, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bud and Seta as applied to claims 34 and 47 above, and further in view of Bahl (US 7,020,475).

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Regarding claims 44 and 55, in addition to the limitations previously addressed, wherein two or more radio heads are adapted to receive signals transmitted from a user terminal and to transmit these to the concentrator via the local shared resource network (fig. 1: note mobile radio module 'MRM' in the middle of the diagram transmits to more than two radio bases 'RB').

The combination is silent on the concentrator is adapted to select the signals from one of the radio heads.

Bahl teaches a method for selecting only one signal from multiple sources (select highest signal strength measured by SNR, col. 5 lines 1-7).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination (Bud: fig. 1 box MC) by incorporating the algorithm for selection based upon SNR in the concentrator. This modification can be performed in software. This modification would benefit the system by ensuring that only the signal with the best quality is forwarded by the concentrator.

Regarding claims 45 and 56, the first network is adapted to prevent the received signals of the not-selected radio heads from being transmitted through the local shared resource network

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(select highest signal strength measured by SNR, col. 5 lines 1-7). Note, only signal with highest strength is selected.

7. Claims 46 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bud and Seta as applied to claims 34 and 47 above, and further in view of Acharya (US 5,974,036).

The combination is silent on the first network having means to transmit a beacon signal from two or more radio heads, each signal being transmitted with a selectable delay.

Acharya teaches a network having means to transmit a beacon signal from two or more radio heads / base stations, each signal being transmitted with a selectable delay (fig. 4, col. 4 line 63 - col. 5 line 1). Regarding selectable delay, the examiner corresponds this with the time period in between each base station transmitting its beacon signal.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Bud and Seta by having the radio bases (Bud: fig. 1 boxes RB) transmit periodic beacon signals. This modification can be performed in software. This modification would benefit the system in performing handoff (Acharya: col. 4 line 63 - col. 5 line 1).

Allowable Subject Matter

8. Claims 36, 40-42, and 52-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

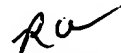
Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ronald Abelson
Examiner
Art Unit 2616


CHI PHAM
SUPERVISORY PATENT EXAMINER 6/28/06